

Attitude of medical students towards general practice and general practitioners

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SUMMARY

Background: The stimuli for this work came from the need to identify and understand the origin of students' attitudes towards general practice in the context of undergraduate curriculum reform and concerns about recruitment.

Aim: To evaluate attitudes of medical students towards general practice as a specialty and general practitioners (GPs) as doctors and explore factors influencing students' attitudes and intended career choice.

Design of study: Cross-sectional survey.

Setting: Final-year students at two London medical schools.

Method: Questionnaires were distributed to 984 students and the results analysed using SPSS analysis.

Results: The mean response rate was 72% (700/984). Medical students had a positive attitude towards general practice as a specialty (mean Likert score = 3.90/5, 95% confidence interval [CI] = 3.86 to 3.94) and towards GPs as doctors (mean Likert score = 3.62/5, 95% CI = 3.59 to 3.66). They rated personal experience of GPs as the most important factor influencing their attitude. Students' attitudes towards general practice and GPs were more positive ($P < 0.001$) in the fifth year. First-year students perceived the media to have a more important role in influencing their attitude than those in the fifth year ($P < 0.001$). General practice was the only career option to significantly increase in popularity between the first and final year ($P < 0.001$). **Conclusions:** Medical students end their undergraduate years with a more positive attitude towards general practice than has been reported elsewhere recently. This may be partially explained by the greater contact with GPs and suggests that efforts by medical schools to ensure a more balanced, community-based curriculum promotes positive attitudes to general practice. The influence of the media on the first years of medical school requires further investigation.

Keywords: medical students; attitudes; career choice; media.

Introduction

THIS study investigates attitudes of medical students towards general practice as a specialty (including intended career choice) and towards GPs as doctors. It explores the factors which students believe have influenced these attitudes. The stimuli for this work came from the need to identify and understand the origin of these attitudes in the context of undergraduate medical education reform¹⁻⁴ and concerns about recruitment into general practice.⁵⁻⁸

The study attempts to determine students' attitudes towards general practice prior to a definitive career choice. Previous research has concentrated on career choice as the ultimate behavioural outcome of underlying attitudes to a given specialty; however, career choice alone is not necessarily a good^{9,10} measure of underlying attitude. While Petchey¹¹ found that junior doctors in the UK perceived general practice as a 'negative choice', studies in the USA suggest that medical students choosing against a career in general practice do not necessarily have a negative attitude towards it. Indeed, some students believe general practice to be challenging and comprehensive, with an intellectual content comparable to other specialties.⁹ Other factors, such as lack of status and stressful lifestyle, influence students' career decisions away from primary health care.^{9,10} Social psychology research suggests that increased exposure to a social group (in this case GPs) generally leads to more positive attitudes.¹² It seems timely to explore these issues in the context of a recent increase in general practice teaching in UK medical curricula.

Method

The study was conducted with first and fifth-year students at two London medical schools: Imperial College School of Medicine (ICSM) and United Medical and Dental Schools of Guys and St Thomas' Hospitals (UMDS). The students were chosen from the first and fifth years to allow the maximum amount of information on general practice teaching courses to be collected. The two schools were selected for their similarity in course content and teaching methods. The students' contact with GPs begins in the first year at both schools, and the courses are both under development — so both groups of fifth-year students have experienced ongoing change during their course.

To develop a conceptual framework, two focus groups were run comprising six and ten fourth-year ICSM students, who were selected for convenience during their general practice teaching course. Extensive notes were made throughout these sessions and themes were identified. From these and Eagly and Chaiken's model of attitudes¹² a conceptual framework was developed, which was explored by the questionnaire. This model considered the factors

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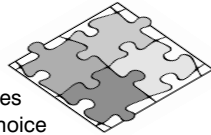
HOW THIS FITS IN

What do we know?

Research into medical students' attitudes towards general practice as a career choice has suggested that students choosing against such a career do not necessarily have a negative attitude towards it. Furthermore, it is believed that exposure to a social group (in this case general practitioners) generally leads to more positive attitudes.

What does this paper add?

This study has found that students believed that their personal experience of general practice was a high positive influence on their attitude, implying that greater exposure of medical students to GPs can have a positive effect on future career choice.



influencing attitudes, the resulting attitude, and the evaluative response the attitude gave rise to (Figure 1).

Applying this model to the questionnaire meant that each question was devised to stimulate an evaluative response, indicating an underlying positive or negative attitude. It was possible to test responses to the main constructs by using questions that tested a number of different aspects of the same constructs. The design of the questionnaire ensured that the constructs and the questions that tested them had construct validity and Cronbach's α correlation-tested internal consistency.

The key attitudinal constructs in the questionnaire had emerged from the focus groups. (The number of questions per attitudinal construct in the questionnaire is given in brackets.) An average Likert score for each construct was then derived by combining the answers to the individual questions for each construct and dividing by the number of questions in that construct. The constructs were:

1. students' attitudes towards general practice as a specialty: perceived job satisfaction (three questions), and the nature of the doctor-patient relationship (four questions);
2. students' attitudes towards GPs as doctors (compared with hospital doctors): exploring students' perception of personality (three questions), intelligence (five questions) and status of GPs (three questions);
3. factors influencing students' attitudes: the media (television, radio, newspapers and magazines — two questions), students' direct personal experience of general practice (including good and bad examples of GPs — three questions), the general practice-based teaching courses (three questions) and the opinion of others (family, friends, and hospital doctors — three questions); and
4. extent of intention to follow a career in anaesthetics, general practice, hospital medicine, obstetrics and gynaecology, paediatrics, research, and surgery (no undecided option was given, one question per specialty). The questionnaire was designed to give 'stimulus equivalence', so some of the scores (five-point Likert Scale) were reversed in the analysis. This generated an

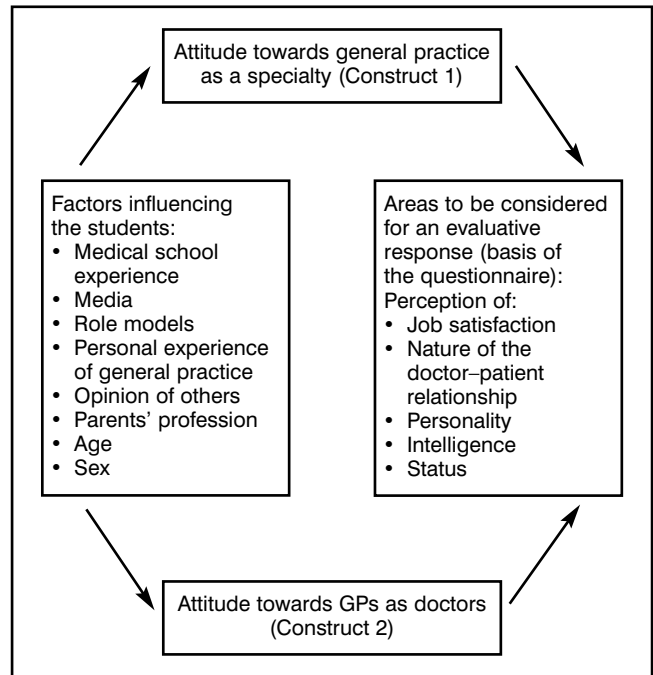


Figure 1. Conceptual framework of the attitudes of medical students towards general practice and GPs (using a model by Eagly and Chaiken¹²).

overall score of positive attitude towards general practice or GPs.

The questionnaire was piloted with three groups of students and several changes were made as a result. First and fifth-year students at ICSM and UMDS completed the questionnaire at the end of a lecture, and on two occasions at the end of an examination. The person distributing the questionnaires was a GP (one of the authors). It was not possible to blind the students to this, but the information given to them was consistent.

The data was entered into SPSS and following Levene's test for homogeneity of variance, the data was analysed using *t*-tests (one way ANOVA [analysis of variance]) as the data was deemed to be parametric. If Levene's homogeneity of variance was significant then non-parametric tests (Mann-Whitney U) were used.

Results

Seven hundred students completed the questionnaire: 323 from UMDS and 377 from ICSM. (Table 1). The mean response rate was 72% (range = 58–81%). The overall attitude towards general practice, including both general practice as a specialty (Cronbach's α correlation = 0.6) and GPs as doctors (Cronbach's α correlation = 0.45) had good internal consistency (Cronbach's α correlation = 0.74). Constructs used to determine the factors influencing the students' attitudes were students' direct personal experience of general practice (Cronbach's α correlation = 0.5), the general practice-based teaching courses (Cronbach's α correlation = 0.6), the opinion of others (Cronbach's α correlation = 0.6), and the media (Cronbach's α correlation = 0.9).

Students' attitudes towards general practice as a special-

Table 1. Description of students.

Variable	Numbers	Percentage
Mature students	No 574	82
	Yes 72	10
	Missing 54	8
Parent is a GP	No 505	72
	Yes 66	9
	Missing 129	18
Place	UMDS 323	46
	ICSM 377	54
Sex	Male 303	43
	Female 361	52
	Missing 36	5
Year	First 332	47
	Fifth 368	53

ty (mean score = 3.90/5, 95% CI = 3.86 to 3.94, derived from combining scores from individual questions and averaging the responses) and towards GPs as doctors (mean = 3.62/5, 95% CI = 3.59 to 3.66) were positive. However, although 44% of students had a strongly positive attitude towards the specialty (Likert score = 4–5), only 18% had a strongly positive attitude towards GPs as doctors when compared with hospital doctors. The factor students believed influenced their attitudes the most was their direct personal experience of general practice (knowing a good or bad example of a GP, and personal experience as a patient). Half of the students (51.4%) believed this had strongly influenced their attitudes (Likert score = 4–5).

The students' overall attitude towards general practice differed slightly but significantly ($P < 0.001$) from the first to the fifth year (Table 2), at both medical schools. Compared with the first-year students, the fifth year had a more positive attitude towards general practice as a specialty ($P < 0.001$) and GPs as doctors ($P < 0.001$). First-year students believed the media had influenced their attitude towards general practice significantly more ($P < 0.001$). Fifth-year students were more likely to intend to become a GP than the first-year students ($P < 0.001$). This was the only significant increase in intended career choice. Obstetrics and gynaecology, paediatrics and surgery were all less popular with final year students than with first years ($P < 0.001$ for all three). There was no difference in interest in anaesthetics, hospital medicine, and a

career in research between the two groups.

Female students viewed general practice more positively than male students independent of year ($P < 0.001$) (Table 2). They had more positive attitudes towards general practice as a specialty and towards GPs as doctors. They also believed their direct personal experience had influenced their attitude towards general practice more than the male students did ($P < 0.001$). Female students (irrespective of year) were significantly more likely to intend to be GPs ($P < 0.001$) or to pursue a career in obstetrics and gynaecology ($P < 0.001$) or paediatrics ($P < 0.001$). However, men in both years expressed more intent to become surgeons ($P = 0.002$).

There was no difference in the attitude of the students from the two medical schools towards general practice. Comparing the attitude of mature students towards general practice with entrants straight from school showed no difference.

Although the numbers were small, those students with a GP parent ($n = 66$), showed a more positive overall attitude towards general practice ($P = 0.001$) (Table 3). There was no difference in the attitudes towards general practice of students with a medical parent working in a hospital ($n = 82$) compared with those students without a medical parent — both were less likely to intend to become GPs ($P = 0.004$) (Table 3).

Discussion

The results suggest that students have positive attitudes towards general practice as a specialty and GPs as doctors with fifth-year students more positive than first-year students. The number of students intending to pursue general practice as a career was also greater in the older group. The students rated the most important influence on their attitude as their direct personal experience of general practice (knowing a good or bad example of a GP and personal experience as a patient).

The exploration of attitudes is notoriously difficult and interpretation of results can be fraught. Little evaluation of the effect of changes in curricula, as a result of *Tomorrow's Doctors*,¹³ has taken place. The strengths of our study include the large numbers of students involved and the good response rate. Two medical schools were used that had similar curricula and had undergone recent change to

Table 2. Differences between the first and fifth year students and between gender.

Variable	Year 1 Score (95% CI)	Year 5 Score (95% CI)	Male Score (95% CI)	Female Score (95% CI)
Overall attitude towards general practice	3.64 (3.59–3.68)	3.83 (3.79–3.87)	3.64 (3.60–3.70)	3.81 (3.77–3.85)
Attitude towards GPs as doctors	3.55 (3.50–3.60)	3.69 (3.65–3.73)	3.55 (3.50–3.61) ^a	3.69 (3.65–3.73) ^a
Attitude towards general practice as a specialty	3.76 (3.71–3.81)	4.03 (3.98–4.08)	3.78 (3.72–3.84)	3.99 (3.94–4.05)
Intended career as a general practitioner	2.56 (2.44–2.69)	2.91 (2.78–3.05)	2.48 (2.36–2.62)	2.96 (2.82–3.09)
Intended career in obstetrics and gynaecology	2.58 (2.45–2.70) ^a	2.23 (2.09–2.37) ^a	2.15 (2.01–2.29)	2.62 (2.49–2.75)
Intended career in paediatrics	3.37 (3.23–3.50) ^a	2.56 (2.43–2.70) ^a	2.79 (2.64–2.94)	3.11 (2.97–3.25)
				$P = 0.002$
Intended career in surgery	3.21 (3.07–3.36) ^a	2.53 (2.37–2.69) ^a	3.37 (3.21–3.53)	2.41 (2.26–2.59)
Influence of the media	2.74 (2.64–2.85)	2.46 (2.36–2.56)	NS	NS
Role models and personal experience	NS	NS	3.73 (3.63–3.80)	3.96 (3.89–4.04)

^aTest used was Mann–Whitney U (in all other cases test used was one way ANOVA). $P < 0.001$ for all cases except where the P value is stated. NS = non-significant.

Table 3. Differences between students with a medical parent. Test used was one-way ANOVA.

Variable	No medical parent Score (95% CI)	Medical parent Score (95% CI)	Significance
Parent working as a hospital doctor: students' intended career choice in general practice	2.77 (2.66–2.88)	2.36 (2.06–2.63)	$P = 0.004$
General practitioner parent: students' overall attitude towards general practice	3.73 (3.69–3.77)	3.90 (3.80–4.00)	$P = 0.001$

enlarge the sample and make the results more generalisable to medical schools with an integrated approach to education. The development of the conceptual framework, which formed the basis of the questionnaire, is a further strength of the study. The internal consistency of the overall attitude of students' towards general practice (Cronbach's α correlation = 0.74) and its validity (through focus groups and piloting of the questionnaire) are also key factors. These factors help to address some of the established concerns relating to this field of enquiry.^{14,15}

Attitudes towards general practice are more positive than previously suggested.¹¹ This may be a result of the students' recent exposure to GPs, a factor identified by Morrison *et al* who found students had a positive attitude after completing a course in general practice which was not sustained after qualification.¹⁶ It is known that attitudes change substantially between qualifying as a doctor and the end of the preregistration year^{9-11,17} and it is therefore not suggested that eventual career choice can be predicted from this research.

Female medical students (irrespective of year) viewed general practice as a specialty, GPs as doctors and general practice as intended career choice more positively than their male counterparts. Several studies in the UK support this finding.^{18,19} The only significant sex difference in factors influencing the students' attitudes was that female students rated direct personal experience higher than male students. It is possible that, since young women have higher consulting rates than their male peer, they have more exposure to GPs and are more influenced by this experience. The more positive attitudes of fifth years may be partially explained by the increased contact that they have had with GPs as a result of their studies.

Previous research has shown marked variation between schools in the percentage of students entering general practice both in America²⁰ and the UK.²¹ There were no overall differences in results from the two medical schools in this study which may be due to similarity of curricula. We were surprised to find that students (especially first years) identified the media as an important influence on their attitude. This may be particularly important in the light of recent negative press attention that general practice has received.

There were a number of limitations to the study. As there was no previously validated attitudinal questionnaire, a new one based on focus groups and their literature was devised. Most, but not all, constructs had good internal consistency. The questionnaire contained some ambiguous terms (e.g. caring) that may have been interpreted subjectively by the students. Some terms were emotive and the students may have responded according to how they thought they should rather than with their 'true' attitudes.

Further limitations of the study are that it is not longitudinal but involves two cohorts of students and the response rates between the groups vary which may have introduced some bias. The acknowledged tendency to respond in a socially desirable manner may have been exaggerated as a result of the questionnaire being distributed by known GPs.

In conclusion, students believed that their personal experience of general practice was a highly positive influence on their attitude. This finding implies that greater exposure of medical students to GPs may positively affect future working relationships and career choice regarding general practice. It also suggests that it is important for providers of undergraduate courses to strive to enhance positive general practice role models.

Future research needs to have a longitudinal design, comparing different curricula. Such studies would be most useful if they followed students' attitudes and the factors that influence them, from selection to postgraduate training, coupling data with student demographics (e.g. parents' work) and details of their courses with other measures, such as A-level grades and criteria used in selection by both students and admissions boards.

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